

2. (Twice Amended) [A] An isolated polypeptide characterized in that it: [-]

- (a) is free of botulinum toxin activity,
- (b) is free of toxoid, and
- (c) is capable of eliciting, in a mammal, an immunological response that is protective against type F botulinum toxin.

3. (Twice Amended) [A] An isolated polypeptide according to Claim 2 comprising a fragment or a derivative of a heavy chain of a type F botulinum neurotoxin.

4. (Twice Amended) [A] An isolated polypeptide according to Claim 3 wherein said fragment or said derivative is up to 600 amino acids long.

5. (Twice Amended) [A] An isolated polypeptide according to Claim 3 wherein said fragment is selected from the group consisting of:

- (a) amino acids 848-1278 of a type F botulinum toxin, *part of a*
- (b) amino acids 848-991 of a type F botulinum toxin,
- (c) amino acids 992-1135 of a type F botulinum toxin, and
- (d) amino acids 1136-1278 of a type F botulinum toxin.

6. (Twice Amended) [A] An isolated polypeptide according to Claim 3 wherein said derivative comprises a dimer of the fragment [according to any of (a)-(d) of Claim 5] selected from the group consisting of:

- Sub Emt*
- (a) amino acids 848-1278 of a type F botulinum toxin,
 - (b) amino acids 848-991 of a type F botulinum toxin,
 - (c) amino acids 992-1135 of a type F botulinum toxin, and
 - (d) amino acids 1136-1278 of a type F botulinum toxin.

B (f) (a) (Twice Amended) A polypeptide composition for use in manufacture of a vaccine, said composition comprising: [-]

(1) an isolated [a] polypeptide free of toxin activity and capable of inducing, in a mammal, protective immunity against a botulinum toxin; and

(2) a polypeptide [adapted to facilitate or enhance] that facilitates or enhances purification of the composition.

B 2 (f) (a) 9. (Twice Amended) A polypeptide composition according to Claim 7 comprising: [-]

(1) [a] an isolated polypeptide according to Claim 2; and

(2) [a] an isolated polypeptide [adapted to bind to] that binds a chromatography column.

C 7 10. (Twice Amended) A polypeptide composition according to Claim 7 comprising an isolated polypeptide [adapted to bind to] that binds an affinity chromatography column.

B 3 Sub G5 17. (Twice Amended) A method of making a pharmaceutical composition comprising: [-]

(a) expressing in a host cell a DNA encoding a fusion protein, said protein being a fusion of (i) a polypeptide free of toxin activity and capable of inducing protective immunity